Junior Scholastic

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40-Minute Lesson Plan Based on

THE NETHERLANDS

Theme Article, pages 4 and 5

Aim: **To understand the problems that face The Netherlands today.**

Motivation Ideas:

1. Distribute reproductions of well-known Dutch paintings.
2. Ask volunteers to tell or read the story of *The Leak in the Dyke* or *Hans Brinker and the Silver Skates.*

Pivotal Questions:

1. What are some of Holland's geographical problems?

Almost half of Holland is below sea and river level, making it necessary for the Dutch to build dikes and drainage canals. Few crops will grow in Holland, so that there is insufficient food. Lack of minerals is responsible for few industries and insufficient jobs. Holland is greatly over-populated due to small area. Transportation via canals is slow.

2. What are some reasons the Dutch might give for wanting to remain in Holland despite their geographical problems?

Holland is a liberal, democratic country. There is almost no religious or racial intolerance in Holland.

3. How did the Germans seek to ruin Holland?

They destroyed dikes and canals, letting in the sea. They wrecked railways and roads and stole trains, trucks, factory and farm equipment.

4. How has Holland's struggle to keep out the sea affected her way of life?

By making Holland's soil unfit for most crops and minerals, the sea forced the Dutch to seek the food and raw materials they needed in distant lands. Holland's struggle with the sea thus led her to establish a great colonial empire and build a great merchant fleet.

5. Why does Great Britain want to keep Holland as strong as possible?

Holland is just across the North Sea from Britain. When Holland is under enemy control it is a dangerous threat to Britain's safety. Britain does not want Holland to lose her colonies because if they fall into unfriendly hands, British colonies might be endangered.

6. Do you think it is right for a country as small as Holland to rule such a large empire?

7. British troops have recently been fighting to put down the natives' revolt against the Dutch in the East Indies. Do you think Britain has a right to use her troops in this manner?

Summary Questions:

What are the major problems that may prevent Holland from maintaining her position as an independent nation?

Loss of colonies; lack of sufficient food and industry; over-population; insufficient jobs; lack of military security.

END OF 40-MINUTE LESSON PLAN

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COMING NEXT ISSUE

Theme Article: *Belgium*
Transportation Feature
Short Story: *Making a Good Indian*
Science and Invention: *Simple as Alpha, Beta, Gamma*

QUICK QUIZ

TEN QUESTIONS FOR A FIVE-MINUTE TEST

1. What is another name for Holland? (The Netherlands.)
2. Who is the monarch of Holland? (Queen Wilhelmina.)
3. What nation occupied Holland during the war? (Germany.)
4. What group of islands off the coast of Asia belongs to Holland? (Dutch East Indies.)
5. Which is nearer to the earth – the moon or the sun? (The moon.)
6. What scientific instrument enabled man to make his first close study of the moon? (The telescope.)

Creative Relationships in the Classroom

SEE PAGE 3-T

MAR -5 1946

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7. What member of the President's cabinet recently made a report about U. S. mineral resources? (Secretary of the Interior Ickes.)

8. Who was the first Chief Justice of the U. S. Supreme Court? (John Jay.)

9. What type plane broke the transcontinental speed record last month? (Lockheed P-80.)

10. Who discovered radium? (Marie and Pierre Curie.)

ATOMIC WORLD — p. 6

In "The Curies Were Curious" we describe the discoveries of four great scientists – Wilhelm Roentgen, Antoine Henri Becquerel, and Pierre and Marie Curie.

Point out to the class the *continuity* of these discoveries. Each finding was not independent. It grew out of earlier developments that opened up new fields of investigation. Roentgen would not have unearthed the X-ray if Sir William Crookes' discovery of the cathode ray had not given him a clue. In the same way, Becquerel capitalized on Roentgen's X-ray and in turn gave inspiration to his assistants – the Curies.

What are X-rays? Have you ever had an X-ray taken of any part of your body? Why? What did it show?

What did Professor Becquerel discover about uranium? How was his discovery an advance over Roentgen's findings? How did the Curies use Professor Becquerel's discovery to isolate radium?

Did any of you see the movie, *Madame Curie?* What outstanding scenes do you recall? What did you learn from it?

Did you know: That Roentgen won the Nobel prize for physics in 1901? That he was made a baron because of his great discovery? That X-rays are used to distinguish precious stones from imitations (imitations glow long after they have been exposed to X-rays; precious stones lose their glow almost immediately)? That Mme. Curie won the Nobel prize twice – in 1903 and 1911? That Mme. Curie came to the U. S. in 1921 and was presented with a gram of radium by President Harding on behalf of American women?

For further reading: Madame Curie by Eve Curie; *Radium Treasure and the Curies* by I. Eberle. *For classroom dramatization:* "A Gram of Radium" by Cora Burlingame in *Plays* magazine, April, 1944.

Discussion Questions

1. How has the X-ray helped people to preserve their health?

2. Mme. Curie is called the world's greatest woman scientist. Do you think she deserves this honor?

Fact Questions

1. Who discovered the X-ray?

2. From what substance did the Curies extract radium?

3. What element of matter did Professor Becquerel discover to be radioactive?

OUR VANISHING MINERALS — p. 2

The Ickes report on the state of the nation's resources provides a basis for a lesson in economic geography.

Have pupils make a list of 25 important minerals that are found in the U. S. Then ask them to locate these minerals on an outline map.

What areas in the U. S. have the largest mineral resources? Which resources are the most abundant?

Have each pupil choose 10 minerals from the list of 25 and draw up a list of the various ways each was used during the war.

For further details on the mineral wealth of the continental shelf, refer pupils to "Treasure on the Continental Shelf," *Junior Scholastic,* November 26, 1945.

Bibliography: Craig, Gerald S., *Our Earth and Its Story* (Ginn & Co., 1932); Rugg, Harold O. and Krueger, L., *Building of America* (Ginn & Co., 1936); Kelty, Mary G., *Growth of the American People and Nation,* (Ginn & Co., 1937).

Discussion Question

How did our vast mineral wealth help in the war?

Fact Questions

1. What is a continental shelf?

2. Who is U. S. Secretary of the Interior?

A VISIT TO THE MOON — p. 3

This week's article on man's imaginary trips to the moon is the second in a series of stories on the "dead planet" which began with *Contact With the Moon* last week.

Ask your pupils to write an imaginary story of "A Trip to the Moon." This type of assignment will give pupils an opportunity to express their love for adventure and fantasy. It will also challenge their imagination and stimulate original ideas.

Have the authors of the best stories read them aloud, and the class select the outstanding one.

Bibliography: In addition to the Jules Verne and H. G. Wells stories mentioned in the article, pupils will find Otto Gail's *By Rocket to the Moon* (Dodd, Mead & Co., 1931) exciting reading.

Discussion Question

1. Do you think it will ever be possible for man to visit the moon?

Fact Questions

1. How far away is the moon from the earth?

2. Does the earth revolve about the moon or the moon about the earth?

AIR WEEK — p. 10

Have pupils list the many ways in which the airplane is used (a) during war; (b) during peace. (Refer to Air Week, Oct. 22, 1945 for possible peacetime uses.)

Would you like to own a plane? What kind? Do you think the airplane will ever replace the automobile as the most common means of transportation? If it should, what changes would have to be made in your community?

Fact Questions

1. How long did it take the Lockheed P-80 to cross the continent?

2. What does propjet mean?

Solution to Word Puzzle, p. 15

ACROSS: 1-glands; 6-slim; 7-up; 8-ships; 9-to; 10-placed; 13-co.; 14-sari; 15-eye; 16-hr.; 17-Me.; 18-Ra; 20-ht.; 22-nab; 24-dime; 27-ai; 28-reamed; 30-Ga.; 31-idiom; 33-Ur; 34-seen; 35-Easter.

DOWN: 1-glide; 2-lip; 3-Amsterdam; 4-Dutch; 5-spoor; 6-she; 8-scientist; 10-P.S.; 11-la; 12-arm; 19-aim; 20-Hague; 21-tiara; 23-brier; 25-me; 26-Ed; 29-eon; 32-Dee.

Answers to Citizenship Quiz, p. 12

1. DUTCH TREAT: 1-b; 2-c; 3-b; 4-c; 5-b.
2. SCIENCE MATCH: a-2; b-3; c-1; d-4.
3. MOONQUIZ: Check 1, 4, 5.
4. DIG IN!: 1-b; 2-b; 3-a; 4-b; 5-a.
5. PICTURES TO GUIDE YOU: 1-The Netherlands or Holland; 2-Queen Wilhelmina; 3-Galileo; 4-Danny Kaye.

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Junior Scholastic

MOON INHABITANTS

One of the earliest movie cartoonists, Georges Méliès, drew these weird creatures for his film "Trip to the Moon." (See page 3)

FEB. 18, 1946 • VOL. 18 NO. 3

JUNIOR SCHOLASTIC
Your World-View Magazine for School and Home

Our Vanishing Mineral Wealth

WHEN a nation fights a war, it spends men, money, and raw materials at an enormous rate.

Now that the war is over, our Government is adding up the cost.

One of the most expensive items on the cost sheet is natural resources. We used up great quantities of our mineral wealth in manufacturing war machines and materials. These minerals cannot be replaced.

The branch of our Government most concerned with our country's natural resources is the Department of the Interior.

OUR MINERAL SHORTAGE

Secretary of the Interior Harold L. Ickes recently issued a shocking report. His report showed just how deeply the four years of war dipped into our country's mineral wealth.

Mr. Ickes pointed out that the United States has only nine major minerals in sufficient quantity to last for another 100 years. These nine minerals are iron ore, nitrogen, magnesium, bituminous coal, lignite, phosphate rock, molybdenum, anthracite, and potash.

It takes Nature a million years to make a lump of coal, but man can burn it up in a few minutes.

Our supply of 22 other important minerals will last for only 35 years or less, said Mr. Ickes.

Our petroleum supply is so low that in another 20 years we will have no oil unless new deposits are found. Mr. Ickes said that the chances are good that we will find more oil.

There is also the possibility that atomic energy may be harnessed to drive ships and railroad locomotives, which now depend on coal or oil. How soon this will be accomplished, nobody knows.

Today, the "cream" of our high-grade ores is used up. This means that we must now begin to mine "second-grade" mineral deposits. We must also improve our methods of mining, so that these deposits will produce large quantities of metal.

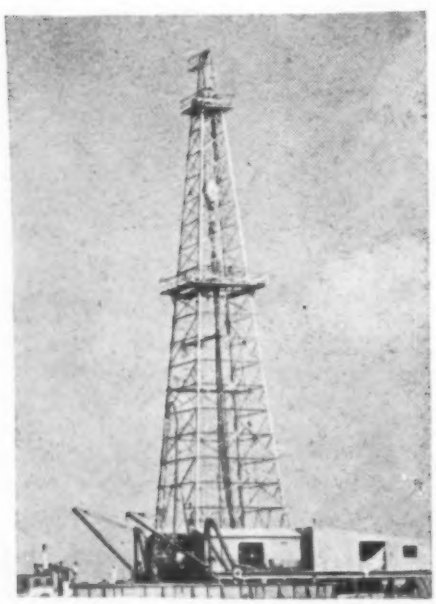
We can also increase our mineral deposits by exploration, said Mr. Ickes. During the war, the Bureau of Mines discovered more than 1,000 new mineral deposits, which increased our mineral wealth by more than one billion tons of ore.

Another source of minerals which has not yet been widely tapped is the Continental Shelf – an underwater plateau which surrounds the U. S. and Alaska. The Continental Shelf has an area of 760,000 square miles and is expected to be a rich source of oil and other mineral deposits.

Mr. Ickes said that until we can increase our supply of minerals through exploration and improved methods of mining, the U. S. should import minerals from other countries.

He said that these imported minerals should be placed in a stockpile and held in reserve. Whenever the production of minerals in the U. S. exceeds the amount actually in use, Mr. Ickes said, the excess minerals should also be placed in the stockpile.

Mr. Ickes gave warning that "in the games of war and trade which nations play, a century is only a little while."



Standard Oil Co. (N. J.)

OIL IS GOING FAST: Petroleum deposits that we now know of in the U. S. will be used up in 20 years. But more may be discovered.

Donald H. Ross

HOW MUCH MORE? How many more trips to the pit will these miners be able to make before the supply of coal is all gone?

NEW USE FOR ATOM BOMBS

A dramatic way in which we might refill our mineral treasure chest was recently suggested by Eddie Rickenbacker, president of Eastern Air Lines.

Mr. Rickenbacker said that explorers have reported the presence of gold, iron, copper, coal, and possibly oil in the regions of the Antarctic. The difficulty with mining these minerals is that the soil of the Antarctic is covered by immense ice caps.

Mr. Rickenbacker believe that atomic explosives would crack the polar ice caps and expose the soil underneath. These explosives, he said, could be dropped by long-range aircraft.

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A Visit to the MOON

FOR hundreds of years, the moon has captured man's imagination. He has sung its praises in song, poetry, and story. But man has never been able to fathom the moon's deep, dark secrets.

Why is man so concerned about the moon? It is one of the smallest bodies in the heavens. And the light it casts over the earth is not its own – but reflected sunlight. Why, then, does the moon stir man's imagination more than any other heavenly body?

There are several reasons. The moon is the earth's satellite – which means that it is the only small planet revolving around the earth. It is also closer to the earth than any other heavenly body. The moon is only 238,857 miles away from us – while the sun is 93,000,000 miles from the earth.

Because the moon is the closest heavenly object, man has dreamed for centuries of visiting this mysterious planet and exploring its wonders. Now that he has made radar contact with the moon, he is more eager to visit it than ever.

MAN STUDIES THE MOON

Man's knowledge of the moon was learned slowly. In ancient times, the shepherds of Chaldea, in Asia Minor, believed that the moon was a huge mirror reflecting the earth's image. The Greeks and Romans worshipped moon goddesses. The early Christians imagined that they saw in the moon the figure of the traitor Judas, banished from the earth.

But until the telescope was invented in the 17th century, man could only guess at the structure of the moon and inhabit it with creatures of his imagination.

Through the telescope, man was able to explore the moon's surface with his own eyes. Galileo, a pioneer astronomer, discovered that the moon was not a smooth sphere, as it had appeared to man. Its rough surface was visible even through his crude telescope.

But while man was able to make his first scientific studies of the moon through the telescope, he could not accurately record what he saw until a mechanical eye – the camera – came to his aid.

The first photograph of the moon was made in New York City in about 1840. It showed a crude likeness of the moon that left much to be desired. Today, powerful cameras photograph the moon in such fine detail that it seems no more than 100 miles away.

One of the earliest movies ever made was called *A Trip to the Moon*. It was a cartoon – similar to the Walt Disney cartoon films that delight movie audiences today.

A Trip to the Moon was made in 1902 by a French artist and magician named George Méliès. Our front cover is a scene from this film.

Méliès was the Walt Disney of his day. This was his fantastic idea of making entertainment out of people's great interest in the moon.

Scientists, of course, are certain today that there is no life on the moon. They call it the "dead planet."

Méliès' film is not the only imaginary trip man has taken to the moon.

In Jules Verne's famous tales, *From the Earth to the Moon* and *Round the Moon*, three members of a Baltimore Gun Club are shot to the moon from a colossal cannon called the Columbiad.

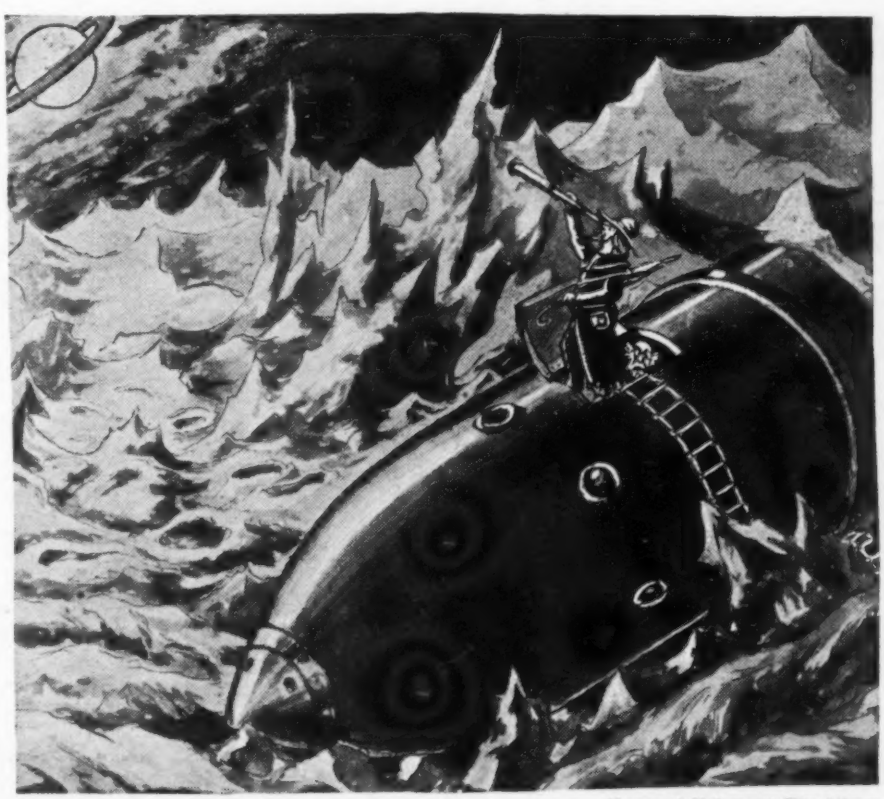
H. G. Wells, the British author, wrote *The First Men in the Moon*, in which explorers travel to the moon in an airship made of an imaginary metal that defies the law of gravity.

Of course, Mr. Wells was never able to produce this magic metal. And Jules Verne never demonstrated that a man could be projected to the moon from the mouth of a cannon.

ROCKET TO THE MOON

Men have long talked of taking a rocket to the moon. R. L. Farnsworth, president of the U. S. Rocket Society, is certain that it can be done. He said that with $300,000 the equipment could be built and the rocket launched. It would take about two years to get ready, he said.

Shooting a rocket to the moon involves many problems. These will be discussed in our article next week "A Scientist Makes a Visit to the Moon," by Robert S. Richardson of the Mount Wilson Observatory (California) and W. T. Skilling, instructor in astronomy.



Museum of Modern Art Film Library

A scene from "A Trip to the Moon," cartoon film made in 1902, shows scientists making an imaginary landing on the moon's surface in a rocket ship

The picture on our front cover was obtained from the Film Library of the Museum of Modern Art, in New York, where hundreds of old motion pictures are on file.

The Dutch Once More Are Reclaiming Their Land from the Sea

THE NETHERLANDS

WHAT picture comes to your mind when you think of Holland?

Do you see plump Dutch housewives in pointed caps and wooden shoes scrubbing the streets of Rotterdam? Windmills turning creakily in the salt sea breeze? Apple-cheeked Dutch youngsters skating on ice-coated canals? Fields of tulips – and huge dikes hurling back the swirling surf of the North Sea?

That is a picture of Holland before the war – and the Dutch are working hard to make it a true picture of their country again. But today Holland is a bleak portrait of a war-torn nation.

The heart of Rotterdam lies in ruins – destroyed by Nazi dive-bombers. Many of the windmills are silent masses of rubble. And many of the fields which were bright with tulips now lie under brackish gray waters – flooded by the sea when the Germans wrecked the canal locks and blew up the dikes.

Holland's age-old battle to keep out the sea is one of the greatest accomplishments of man. Holland's whole way of life is affected by her constant war with the sea.

The 9,000,000 people of Holland, whom we call the Dutch, call themselves Nederlanders. Their country, The Netherlands, means "Lowlands."

HOLLAND AND THE SEA

Holland actually is low land. Almost half of Holland's 13,000 square miles are below sea and river level (see map). To hold back the sea, the Dutch built huge dikes. They reclaimed★ large areas of Holland from the sea by building dikes and pumping out the sea water.

This reclaimed land – formerly swamps, lakes, and inland seas – is divided into about 2,500 districts called *polders*. If the Dutch did not constantly work the pumps, the *polders* would soon be flooded again by water seeping through the soil.

The Dutch used thousands of electrical pumping stations, as well as windmills, to pump the water out. Canals drained the water out to sea. The canals were also used by the Dutch for transportation, just as we use highways in the U. S.

Hundreds of years of hard work by the Dutch changed vast flood areas of Holland into fertile land and kept the hungry sea-wolf at bay. But in a few months, in the spring of 1945, the German army occupying Holland ruthlessly destroyed many of the Dutch dikes and canals. Holland's old enemy – the sea – once more came roaring in.

German soldiers also looted the country of trains, trucks, and buses. They tore up railway tracks, blew up bridges, and destroyed roads. They stole factory and farm equipment.

Bombing and shelling have taken a heavy toll of Dutch buildings and homes – about 394,000 have been destroyed or damaged. Some of this destruction was caused by Allied forces in furious attacks to free the Dutch from their conquerors.

HOLLAND TODAY

Today, the Dutch are working hard to put Holland back on her feet.

Many of the dikes and canals have been repaired, and huge American pumps are spewing the flood waters back into the sea. But it will be a few years before the reclaimed land will yield crops.

When land has been flooded by sea water it ceases to be fertile. Even after the water has been pumped out, the salt remains in the earth. The Dutch plan to flush out the salt with lime, and drain it off through the canals. The earth must then be fertilized.

Because so much of the arable★ land is not now producing crops, there is a food shortage in Holland. But even in normal times, the Dutch cannot produce sufficient food to supply their needs. Only a few crops – such as oats, sugar beets, potatoes,

Netherlands Information Bureau

Dutch island of Walcheren is shown after Germans flooded it by destroying dikes and letting in sea. A lone windmill stands in the background.

★ Means word is defined on p. 13.

and turnips – will grow in the damp Dutch earth.

Minerals, except for coal, have always been scarce in Holland. Holland normally supplies most of its coal from its own mines, but coal production is still far below normal.

Because of the coal shortage in Holland, many Dutch factories cannot begin producing again. Other industrial plants cannot run until essential machine parts, stolen by the Nazis, are reclaimed from Germany and other parts of Europe.

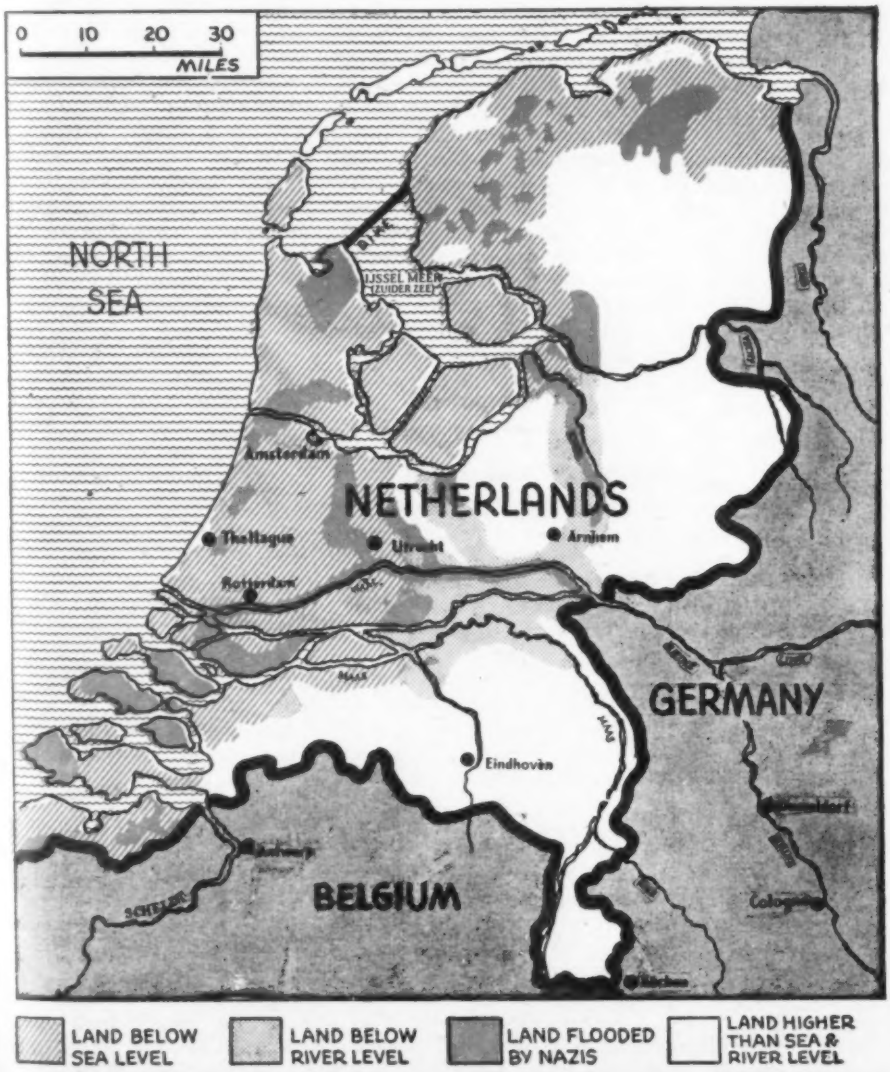
Transportation is particularly bad. Holland's roads are clogged with Dutch refugees who fled inland when the Nazis let in the sea. There are few trains, trucks, or automobiles to take them home. And few jobs awaiting them when they arrive.

Holland has never been able to keep her people fully employed by her own resources. One reason for this, of course, is that Holland provides so few raw materials. Another reason is that the country is greatly over-populated. There are 640 persons per square mile in Holland as compared to 43 in the United States. Holland can provide only a few of the jobs which these people need – farming, pottery making, diamond cutting, etc. Dutch colonies supply Holland with the bulk of her wealth – and her jobs.

DUTCH COLONIES

In the 17th century, the Dutch sailed the seven seas and established colonies in India, the East Indies, the West Indies, South Africa, and Guiana. Hendrik Hudson's discovery of a river in North America led the Dutch to establish New Amsterdam – later to become New York.

The British drove the Dutch out of India, South Africa, and New Amsterdam. But despite these losses, the Dutch today own the third largest empire in the world. Dutch possessions include the Netherlands East Indies and colonies in the West Indies and Guiana.



Because of her colonies, Holland became a seafaring nation with a great merchant fleet. Dutch ships supplied a great many jobs. And new industries sprang up in Holland which used materials supplied by the Dutch colonies.

Today, Holland is threatened with the loss of much of her empire. The native peoples of the Netherlands East Indies are demanding their independence.

British troops in the East Indies are helping the Dutch to put down the native revolt. Great Britain wants to keep Holland as strong as possible. The German occupation of Holland in the war was a dangerous threat to Britain's safety. It gave Germany a base from which to launch an invasion of Britain.

The British fear that if Holland loses her colonies she will become so weak an enemy nation might easily overpower her again. Britain also is afraid that if the Dutch colonies fall into unfriendly hands, British colonies – particularly India – will be endangered.

DUTCH ARE LIBERAL

During the years that the Germans ruled Holland, the loyalty of the great majority of Dutch people to their queen, Wilhelmina, never wavered. Queen Wilhelmina spent most of the war years in London, but returned to Holland after her country was liberated. She is as liberal and democratic as the nation she rules.

There is almost no religious or racial intolerance in Holland. Many Dutch educators and writers – such as the famous Dutch-American writer, Hendrik Willem van Loon – have spread this spirit of good will among the other peoples of the world.

As in Great Britain and France, socialism plays an important part in Holland's economic affairs.

Sixty per cent of Dutch coal mines were nationalized★ during World War I. Almost all Dutch railways, telephone and telegraph systems have been government-owned for many years.

Holland today faces many problems. But the Dutch people are traditionally self-reliant. They have the strength of character needed to rebuild their country and restore Holland as a democratic leader in world affairs.

SCIENCE and INVENTION

ATOMIC WORLD

3. The Curies Were Curious

By DAVID DIETZ, Author of "Atomic Energy in the Coming Era"

WHEN Sir William Crookes discovered the mysterious cathode ray, he started something.

Dozens of physicists began to experiment with Crookes' tubes, as these early vacuum tubes were called. One of these physicists was a German professor named Wilhelm Konrad Roentgen.

While preparing for an experiment, Roentgen happened to cover a Crookes' tube with black paper. Near the tube was a screen covered with a phosphorescent substance. Much to Roentgen's surprise, he noticed that the screen was glowing.

This could mean only one thing – that some invisible ray from the tube had passed right through the black paper and was striking the screen. Roentgen found that this mysterious ray – he called it an X-ray "for the sake of brevity" – would pass right through solid substances and register on a photographic plate.

In 1895, Professor Roentgen published photographs of the bones of his hand, and of keys and coins photographed through his leather pocketbook.

Soon everyone was talking about these amazing X-rays. Scientists rushed back to their Crookes' tubes and began testing for X-rays. They found that these tubes had been giving off X-rays all the time.

Experiments showed that the X-rays began where the cathode rays struck the glass of the tube, or the electrode. A Crookes' tube was built with one electrode in the form of a large platinum target. This tube became known as an X-ray tube.

Four days after Roentgen's discovery became known in the U. S., X-rays were used to locate a bullet buried in a patient's leg. When the X-ray tube appeared, medical men were delighted with the new tool science had given them.

But physicists were badly puzzled. There was nothing in their books to explain X-rays. They set to work to find an explanation.

One of these physicists was Professor Antoine Henri Becquerel, of Paris. Bequerel decided to test a number of substances which became phosphorescent when exposed to sunlight. He wanted to see if any of these substances gave off X-rays.

Becquerel's Experiments

Luckily, Becquerel chose a salt of uranium for his experiment. He wrapped a photographic plate in black paper, and placed a metal cross on it. Then he exposed the uranium salt to sunlight. When the uranium was phosphorescent, he placed it on the cross. Later, when he developed the photographic plate, the image of the cross was on it. Was it the phosphorescence which did the trick?

One day it was too cloudy for Becquerel to repeat this experiment. He laid the uranium salt away in his desk drawer. In the same drawer was a fresh photographic plate, with the metal cross lying on top of it.

Weeks later, Becquerel opened the drawer and found these materials there. He wondered if the uranium had taken effect on the photographic plate, even though the uranium had not been exposed to sunlight. Becquerel quickly developed the plate, and on it he found the image of the metal cross.

Here was a discovery as important as Roentgen's. It meant that exposure to sunlight, and phosphorescence, had nothing to do with the image on the plate. It meant that, for some unknown reason, uranium gave off mysterious rays which acted like X-rays.

Thus, Professor Becquerel discovered radioactivity – the ability of a substance to give off rays which penetrate matter that ordinary light cannot penetrate.

Working in Becquerel's laboratory at this time were Pierre Curie, a young instructor in physics, and his wife Marie Curie. Like her husband, Marie Curie was a scientist.

Marie Curie wanted to find out if any substances besides uranium were radioactive. She found that an element called thorium also gave off these mysterious rays which were so much like X-rays. But most important, she discovered that pitchblende gives off rays four times as strong as those of pure uranium. Pitchblende is the ore from which uranium is obtained.

Curies Discover Radium

Becquerel and the Curies now realized that pitchblende contained some unknown element far more radioactive than uranium. Pierre Curie dropped his own experiments to help his wife search for it. The Austrian government presented them with a ton of pitchblende from the mines at Joachimstahl, Bavaria. The Curies went to work – removing one substance after another from the pitchblende, carefully observing what was left.

In 1898, their search ended in success. From the ton of pitchblende, they obtained a fraction of a grain of a completely new element. They named it – radium.

And what an element it is! Radium, they found, is two and a half million times as radioactive as uranium. Radium liberates heat, electrifies the air around it, causes many substances to become phosphorescent, and is able to kill bacteria.

The world of physics was in an uproar. How could radium give off these amazing rays and do so many other strange things? Could it be that the radium atom was actually exploding itself, and scattering its substance in the form of rays and particles of energy? If this was so, here was a wonderful clue to the structure of all atoms!

Next week: Simple as Alpha, Beta, Gamma.

Culver Service photos

Marie and Pierre Curie, discoverers of radium.

Smash Atom News

A basic particle of matter, never before produced by man, has been blasted from the atom. Scientists who conducted the experiment in the General Electric Research Laboratory in Schenectady, N. Y. announced their discovery on January 26.

This particle is known as the meson. It was discovered when scientists broke down the nucleus of the atom with the world's most powerful X-rays.

The meson has long been known to scientists as one of the forms in which energy bombards the world from cosmic space. But now, aided by General Electric's 100,000-000-volt X-ray machine, scientists will be able to study the meson.

New Rocket Flies 50 Miles Upward

How high can a rocket fly?

No one knows the answer to that question today. But U. S. Army engineers have developed an experimental rocket which can travel 50 miles straight up.

Lieut. Gen. L. H. Campbell, retiring Chief of Army Ordnance, says that the rocket has unlimited possibilities as a weapon of war. He predicts that rockets will replace artillery and that they will eventually have a range of 5,000 miles.

Gen. Campbell said that such long-range missiles might be a gun - and - rocket combination. The gun would start the heavier-cased rocket toward its target, and the rocket motor would take over once the missile was launched.

Radar-guided missiles could also be used if war breaks out again, Gen. Campbell said. "We are bouncing radar beams off the moon," he pointed out. "We can guide space ships by the same methods."

BUILDERS OF AMERICA

JOHN JAY (1745-1829)

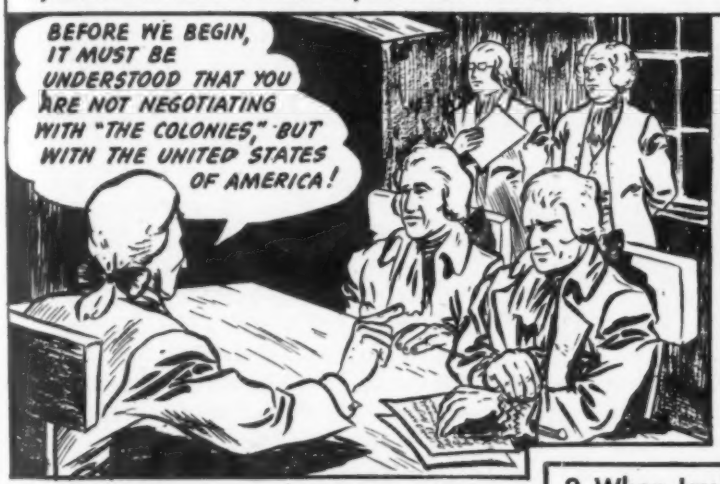
America's First Jurist

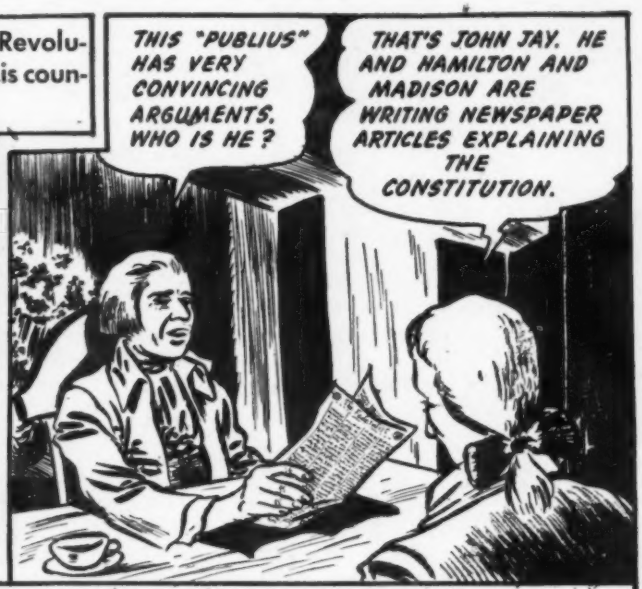
"WHEN the spotless ermine of the judicial robe fell on John Jay, it touched nothing less spotless than itself," said Daniel Webster. His language was flowery, but few have deserved it so well as Jay. As first Chief Justice of our Supreme Court, he gave honor and dignity to that body.

Jay had earned the respect of his contemporaries as a delegate from New York to the First and Second Continental Congresses, Chief Justice of the Supreme Court of New York in 1777, and President of the Continental Congress in 1778. Turning diplomat the next year, Jay was minister to Spain and later helped negotiate the peace treaty with Great Britain. He was Secretary for Foreign Affairs until he became Chief Justice in 1789.

Jay's last public service was as Governor of New York from 1795 to 1801. But he lived on for 28 years in retirement on his Westchester farm.

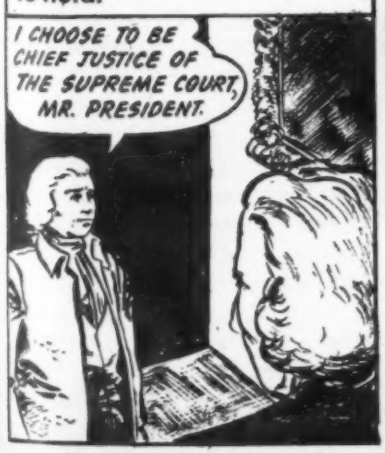
1. The favorable terms of the 1783 peace treaty ending the Revolutionary War were credited largely to Jay. He insisted that his country be treated as Britain's equal from the start.


BEFORE WE BEGIN, IT MUST BE UNDERSTOOD THAT YOU ARE NOT NEGOTIATING WITH "THE COLONIES," BUT WITH THE UNITED STATES OF AMERICA!

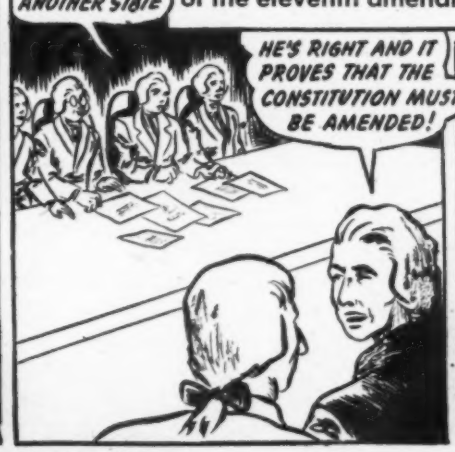

THIS "PUBLIUS" HAS VERY CONVINCING ARGUMENTS. WHO IS HE?
THAT'S JOHN JAY. HE AND HAMILTON AND MADISON ARE WRITING NEWSPAPER ARTICLES EXPLAINING THE CONSTITUTION.

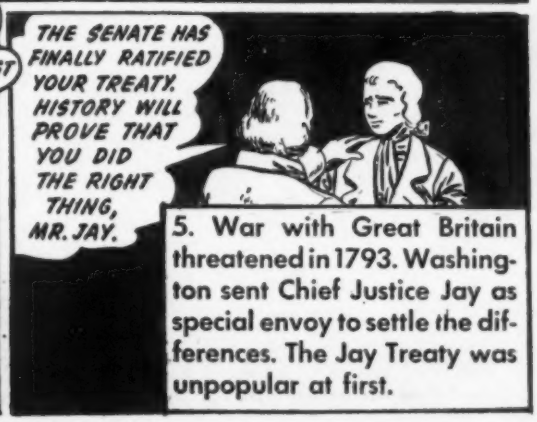
2. When Jay returned home, he worked to gain the people's support for the Constitution and a strong central government. He contributed to the series of papers now called *The Federalist*.

3. When George Washington became President after the Constitution had been ratified, he gave Jay his choice of any Federal office he wished to hold.



4. The most important case to come before Chief Justice Jay was that of *Chisholm vs. Georgia* in 1793. Jay's decision led to the passage of the eleventh amendment to the Constitution.


UNDER THE CONSTITUTION, A STATE CAN BE SUED BY THE PRIVATE CITIZEN OF ANOTHER STATE
HE'S RIGHT AND IT PROVES THAT THE CONSTITUTION MUST BE AMENDED!



5. War with Great Britain threatened in 1793. Washington sent Chief Justice Jay as special envoy to settle the differences. The Jay Treaty was unpopular at first.

Text by Marion Secunda • Drawing by Don Burgess

WONDER MAN

HIGH SCHOOL DAY WITH DANNY KAYE

TUCK knew by the frantic way Tony Uansa collared Bib after assembly that something was up. And he knew it must be terrific because Tony was usually as calm as a statue – even when the *Jeff, Jr.* had a big deadline to meet.

Tuck ambled over just in time to hear Bib exclaim, "Wonder Man!"

"Meaning me?" Tuck grinned hopefully.

Bib scarcely noticed him. She only murmured reverently, "Danny Kaye . . ."

And Tony, the unruffled editor, waved a piece of paper wildly and spouted, ". . . says here . . . CBS . . . after school . . . high school editors . . ."

"Hold on," Tuck commanded. "Let me in on the ground floor." He finally got it straight that CBS had invited a group of high school editors to their Metropolis studio to interview Danny Kaye.

"And I can bring two of the *Jeff, Jr.* staff besides myself," Toby said, calming down a bit.

Tuck gave a cheer. "Don't look any farther," he said. "I've a few questions to ask that guy. Such as, how does he make with that talk that sounds like four languages at once?"

"Okay, you're elected," Toby agreed, "But get ready to ask intelligent questions. I don't want us to sound like amateur reporters."

The minute school was out, Toby and the Tuckers jumped on the bus for Metropolis. They arrived at the CBS studio early enough to get seats right down front. Soon, the room was crowded with high school reporters.

A CBS official came in to test the mike. And then Danny appeared, a tall, lanky young man with red-gold hair – and shoes to match! Everyone applauded. Danny did a little hop, skip, and jump. He pushed aside the mike.

"A guy that's been brought up in the theater shouldn't need that contraption to make himself heard," he grinned. He pulled a chair to the very edge of the platform and sat down.

"What would you like to know?" he asked.

Dozens of hands shot up to start the fireworks. To Bib's surprise, Danny pointed to her.

"What do you say, honey?" he asked.

Bib was so flustered at having the *Wonder Man* call her honey in front of the assembled multitude that she almost forgot her question. But, when she heard Tuck's snicker, she summoned all her reporter's dignity. She asked Danny what he had been most interested in when he was in high school.

"High school?" Danny said reflectively. "That was Thomas Jefferson High School deep in the heart of Brooklyn. I think I wanted to be a baseball player then. I wasn't particularly interested in the theater. But, once at Public School 149 (also in Brooklyn) I was in a play. Not because I could act. All the teacher wanted was someone with a loud voice. Mine was it."

A boy in back of Bib asked Danny what he did for a hobby.

"I read medical books," Danny said. "And I go to hospitals and talk to the doctors and watch operations. Guess I always thought I'd like to be a doc myself."

"What made you decide on show business?" Tuck asked.

"For one thing, my father lost his money. So I couldn't afford medical school," Danny explained. "Also, I guess the urge to be on the stage was really stronger."

Bib got in another question. "And what started you on being an actor?"

"Let's get this straight," Danny said. "I'm *not* an actor. I'm an entertainer. Big difference. Matter of fact, I started out to be a dancer, not a comedian.

"But," Danny grinned, "in my first professional show something happened. I entered, dancing across the stage in a full dress suit and fell flat on my face! Strictly an accident. I thought I was ruined. But my partner whispered, 'Don't get up. Wait for the laughs.' The laughs came. We kept the fall as part of the act. And I've been a comedian ever since."

A tall boy in the rear of the studio raised his hand. "How did you learn to sing that crazy way?"

"Crazy?" Danny thundered. "You mean like this . . ." and he warbled a few lines in his best *Minnie the Moocher* style. It was a sing-song double talk jargon that sounded like words, but really made no sense.

"Happened this way," Danny explained. "In 1934 I was doing shows in the South Seas. We were in the Philippines and Japan. Naturally, I didn't know the language in those countries. So, I'd go onstage and do a skit in gibberish. Every once in a while I'd insert a Japanese or English word to make it sound like real."

"Can you do that double talk slowly, so we can hear what you're really saying?" Huck requested.

"No," Danny said. "I've tried. But it never comes out the same any two times. Here's how it works though.

To be good at imitating dialects you have to have a sensitive ear. I have a sensitive ear. It's a natural talent. Just like some fellows are good at mathematics.

"Now, in learning a foreign language," he continued, "the hard part *isn't* the vocabulary. It's the cadence or rhythm of the speech. For instance, ever noticed that Chinese is more sing-song than Japanese? And you know how Russians boom out on certain syllables. All a fellow like me has to do is to listen to the rhythm of a strange language. I make up words, say them in the proper rhythm, and I'm talking double talk in a language without knowing more than five words of vocabulary."

"I've heard that you speak Chinese fluently," Bib said.

"Heck, no," Danny grinned. "I can't even get my laundry back!"

Toby decided it was time he posed a question. "What part of your work do you enjoy most, Mr. Kaye — stage, radio, or movies?"

"Stage — by far," Danny said. "After you've made a movie, it's nice to sit home evenings and think of your picture playing all over the country. But the pleasure of *making* the movie can't compare with the thrill of playing to people directly. You see, an audience reaction helps me to be a comedian. I get bored doing a scene over and over before a camera. There I am — all dressed up and saying funny things to blank walls.

"That's all right for serious drama," Danny explained. "In fact, it's helpful to an actor who is supposed to be all wrapped up in the character he's creating. Helps him concentrate to have no audience. But my act doesn't depend on being wrapped up in Danny Kaye. It depends on Danny Kaye reaching out and meeting you people in the audience halfway."

"Did you ever want to be an opera star?" the girl next to Bib asked.

"No!" Danny was emphatic. "And am I ever thankful that I don't have to earn my living by singing. You see, I can't *really* sing at all. People judge my songs solely by whether they're funny, not whether they're music."

"What are your favorite songs?" Bib asked.

"I have a great many," Danny said. "But I'm specially fond of Jerome Kern's music. Probably because Jerry was one of my personal friends."

"What inspired you to start making the kind of faces you made in *Wonder Man?*" asked a little blonde girl.

"I don't like the one I've got," cracked Danny.

"Is Danny Kaye your real name?" Toby asked.

"My real name is David Daniel Kominski. People used to call me by my middle name. And my last name was hard to manage, so they'd shorten the whole thing to Danny K — hence, Danny Kaye."

"What was your most embarrassing moment?" a girl in the back of the room piped up.

"It was in Manila," Danny laughed. "I'd been diving for pennies at the Army and Navy club. And I'd managed to get my ears full of water. When I came out, I whacked away at the side of my head, but I couldn't shake the water out. That night in the middle of my dance — splash! Out bounced the stubborn H_2O all over my shirt front. It looked mighty silly."

"What's your opinion of *bobby-soxers?*" another girl asked timidly.

"Danny cocked an eyebrow at her. "I love 'em!" he said. "But that brings up a point I'd like to talk about. Now, Frank Sinatra is a good friend of mine."

The boys groaned, but Danny went on seriously, and they all listened.

"Frank's a talented, intelligent fellow. And he's doing a wonderful job with American youth by giving those talks on tolerance. Unfortunately, he was the victim of some poor publicity. Bobby-soxers swooning and what-not. That was a shame. Made him seem undignified. And made the bobby-soxers seem silly, too. But Frank's no fad. He can really sing. He's going to be popular a long time. I brought his name up only to remind you that bobby-soxers can be enthusiastic without putting on a corny show in public. When they're just themselves, they're the neatest audience in the world."

Tuck raised his hand. "Are you ever bothered by hecklers?" he asked.

"Sure," Danny said. "A heckler turns up in almost any large audience. But it's easy to handle him. I just stop my act. I figure that if there are enough people in the crowd who want to hear the show, they'll shut the guy up. And they do."

"Are you going to do any more movies?" someone asked.

"I've just finished *The Kid from Brooklyn,*" Danny said. "Next fall, I plan to go back to the Broadway stage."

"What are you most proud of, to date?" Toby wanted to know.

Danny smiled. "Here's what I'm most proud of. Several years ago I was invited to entertain at the President's Birthday Ball for the Infantile Paralysis fund. While we were being shown around the White House, we passed the big swimming pool where President Roosevelt used to keep

(Please turn to next page)

Columbia Broadcasting System

High school editors interviewing Danny Kaye in CBS playhouse, New York.

WONDER MAN

(Continued from page 9)

himself fit. Everyone glanced at it, and walked on. Not me. I walked around it to take a good look. I don't know whether you know it, but I worshipped Franklin Roosevelt. He was a real hero to me. On one side of the pool, there was a dressing room. There on a bench lay a blue terry cloth robe with the initials F.D.R. on the pocket. I couldn't resist slipping that robe on for just a minute," Danny recollected happily.

"But, that's not the end of the story," he said. "Shortly after the President's death, I was talking to Faye Emerson, who is married to Elliot Roosevelt. I told her about the thrill I had in wearing that robe for just a second. A few days later, Faye called me up. Said she had a present for me if I'd drop around. And guess what it was? The blue terry cloth robe. And I'm prouder of that than anything else I own."

The CBS officials had begun looking nervously at the studio clock. Bib quickly asked one more question. "How do you like being interviewed?"

"This has been fun," Danny said. "But I don't like it for a steady diet. After a while, it's the same story over and over again. I get bored hearing the same story. Then, I start to make up lies." He grinned wickedly. "So, I guess I better run before I do that to you."

Danny blew the crowd a kiss and breezed off. When Tuck turned to Bib, she was still muttering, "Wonder Man!" to herself.

— GAY HEAD II

Movie Checkup

✓✓✓Tops, don't miss. ✓✓Worthwhile. ✓So-so.

Drama: ✓✓The Bandit of Sherwood Forest. ✓✓✓A Walk in the Sun. ✓✓✓They Were Expendable. ✓✓✓The Bells of St. Mary's ✓✓✓Miss Susie Slagle's. ✓✓Johnny in the Clouds. ✓✓Adventure for Two. ✓✓The Seventh Veil. ✓Shock. ✓Kitty. ✓Diary of a Chambermaid. ✓Detour. ✓The Man in Grey. ✓✓Saratoga Trunk. ✓Leave Her to Heaven. ✓✓Spellbound. ✓Whistle Stop.

Comedy: ✓✓Because of Him. ✓✓Breakfast in Hollywood. ✓She Wouldn't Say Yes. ✓✓✓Colonel Effingham's Raid. ✓What Next, Corporal Hargrove. ✓People Are Funny. ✓✓✓Wonder Man. ✓Kiss and Tell.

Musical: ✓✓✓The Harvey Girls. ✓Ziegfeld Follies ✓✓Yolanda and the Thief. ✓Mexicana. ✓Masquerade in Mexico. ✓Stork Club.

Western: ✓✓Abilene Town. ✓✓San Antonio. ✓✓Frontier Gal. ✓✓Dakota.

Mystery: ✓Cornered. ✓Danger Signal. ✓✓Mildred Pierce. ✓Behind Green Lights. ✓✓✓The House on 92nd Street.

AIR WEEK

WANT to buy an aircraft carrier? Two baby flat-tops, the *Wolverine* and the *Sable*, have been declared surplus by the Navy and are on sale. Automobile manufacturers and railroad men are considering using the flat-tops as ferries. Other prospective buyers are mulling the idea of using the flat-tops as floating night clubs. If you have any better suggestion, and the cash to go with it, submit your bid to the War Shipping Administration. We toyed with the idea of buying a flat-top for our own use, but our bathtub isn't big enough.

* * *

There is no ceiling on aviation *speed* records! A new coast-to-coast record was set on Jan. 26, when a jet-propelled Lockheed P-80 reached LaGuardia Field, N. Y., 4 hrs. and 13 min. after taking off from Long Beach, Calif. Flying non-stop at an average speed of 584 m.p.h., piloted by Col. William Councill, the plane hit a high of 660 m.p.h. between Akron, Ohio, and New York. Col. Councill flew solo.

* * *

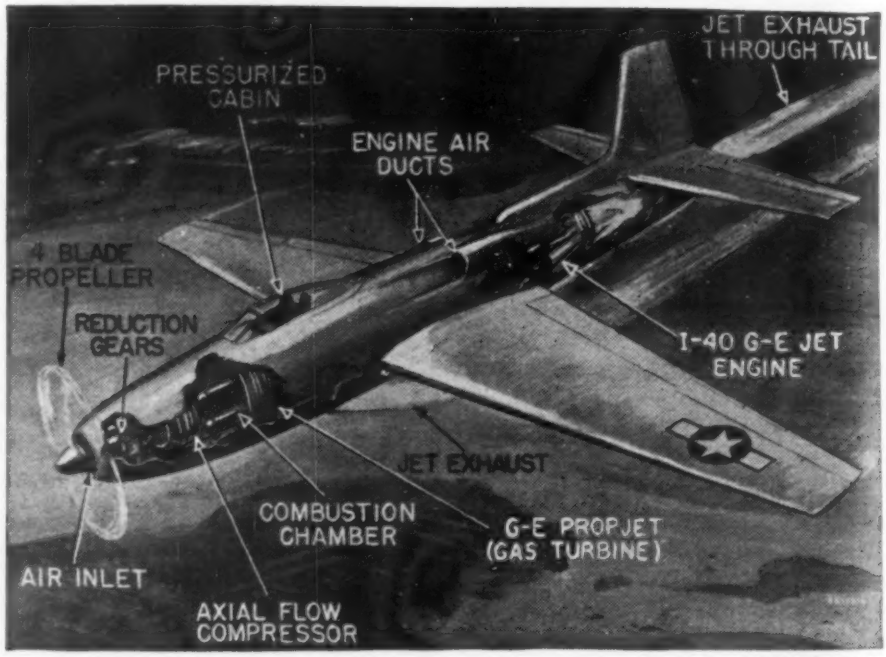
We've been going over our budget to see if we can afford to own a light plane — one costing about $2,000. We find that it's not the cost, but the upkeep which spells MURDER. Insurance alone comes to $368 a year; hangar rental averages another $180 annually; operating cost for 200 flying hours totals $354 more — hm-m-m. Guess we'd better stick to the family jalopy.

We hear that some airport operators are putting "the bite" on their customers. In our neighborhood, hangar rental starts at $30 a month. Flight instruction runs as high as $10 an hour for solo time, and $12 an hour when the instructor takes the flight with you.

* * *

Last month, Miami, Florida, held its first postwar air show. It went over with a smash — in fact, with four smashes. During a light plane race, one Ercoupe chewed the tail off another as they rounded the pylon; a slap-happy bystander taxied a Stinson into the bandstand, while musicians dived for cover; a Luscombe crashed during a take-off, and a Marine Corsair ground-looped. Forty thousand people witnessed the air show. But aviation benefited little in the public eye.

FIRST PROPJET JOB



Press Association

NEW CONSOLIDATED-VULTEE XP-81 is the first plane to fly with a gas turbine driving the propeller. Besides the General Electric Propjet (propeller-drive gas turbine) in the nose, the XP-81 is also powered by a General Electric super-jet engine in the rear. The Propjet drives the propeller and also delivers a jet thrust — so this sleek fighter actually is driven through the air by the propeller and two jets. Together, the Propjet and the jet engine produce as much power as all 4 engines on a B-29. The XP-81 can tear through space at better than 500 m.p.h.

SPORTS

Short Shots

Rough going. Ever hear of a basketball game in which 99 *fouls* were called? That's just what happened when the Atlanta and McLean High Schools of Illinois met this season. Atlanta sank 16 of 53 free throws; McLean made 15 of 46, losing 54-39. Since five fouls disqualify a player, at least 15 men must have been given the heave-o!

Mitt the people. Joe Louis and Billy Conn will say it with boxing gloves on June 19 in the Yankee Stadium. The fight is expected to draw $3,000,000 — a record. Our pick —Joe to kayo Billy in about six rounds.

Good Medich-cine. Mike Medich, 6-5 center of Cleveland (Ohio) Benedictine High, scored 59 points as his team licked Cleveland West, 75-29. He hit for 27 field goals and five free throws.

Proud papas. Father-and-son combinations are popular in Midwestern colleges. Matt Mann III is swimming for Michigan, coached by his dad, while Jack Kobs will play baseball for his papa at Michigan State.

Fumble. Handsome Larry Schultz, former football star at Centre College, applied for a coaching job at MacMurray College (Illinois). He didn't get it. MacMurray has no football team. It's a girls' school!

Hoodoos. Jockeys are superstitious people. Dean Jessop doesn't like to be touched by a broom before a race. Bobby Martin reads his fortune every morning. If the stars warn against danger, he doesn't ride. All jockeys put their right boot on first.

Shooting stars. Far Rockaway High School (Long Island, N. Y.) owns the greatest high school rifle team in the land. The Rockaway hot shots have won 43 straight matches!

Wanna wrestle? Mepham High, a neighbor of Far Rockaway, may not be so hot at shooting. But, brother, how they can wrestle! Their wrestling team has won 72 straight matches.

Shaw enough. Antioch (Calif.) High's Worth Shaw is worth a million to the school's football team. Worth scored 194 points last season, and tossed nine touchdown passes to end Nick Rodriquez. Antioch went through its 10-game schedule unbeaten and untied, scoring 365 points to their foes' 75.

Close shaves. Of Notre Dame's first 11 basketball victories, six were by three points or less!

—HERMAN L. MASIN, *Sports Editor*

He's a Winner!

MEET GEORGE BACKUS, summer school graduate of Thornton High, Harvey, Illinois. Holder of a University of Chicago scholarship at 15, George finished high school in only 3 years. That takes real up-and-at-'em energy!

INTENSELY INTERESTED IN SCIENCE, George is spending his spare time building a telescope, even grinding his own lenses!

He knows how to avoid "MORNING SLUMP"

George eats a real *energy* breakfast. For the heart of that breakfast, he favors Corn.. that famous energy food. George says:

"I go for KIX as a particularly good 'breakfast starter'.

"Since KIX is made of Corn, it *must* be nourishing. I read somewhere that our colonists won the Revolution on corn meal mush!

"I don't know about that, but I'm certain of one thing: Corn this swell new KIX way is a real Winner!"

A FLYING FAN, he's also built 3 gliders. The first two "didn't glide", but George says the third was a real success.

Indians knew this secret, too!

The Indians called Corn: "The Food of Life". On long hunting trips, or in time of war, frequently their mainstay food was *energy-giving* Corn.

But, Lo, the poor Indian, missed out on KIX! KIX—Corn in a brand-new, *grand* new way! Corn *popped* into tempting, tasty "Crunchy Puffs".

Delicious . . . nutritious! Try KIX—that *energy* breakfast cereal.

General Mills

FLYING FANS . . . Get KIX scale-model Plastic Planes! Made by mfr. of scale-model planes used in Navy recognition training. See KIX pkg. for details.

Copr. 1946, General Mills, Inc., Minneapolis, Minn. KIX is a reg. trade mark of General Mills.

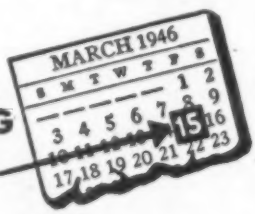
It's a Winner!

Wins on Taste...Crispness...Nourishment!

→ Only
→ one
→ more
→ month

TO SEND IN YOUR ENTRIES FOR JUNIOR SCHOLASTIC WRITING AWARDS!

THE CLOSING DATE IS



WIN A PRIZE FOR YOUR *ESSAY, POEM, SHORT STORY,* OR *ARTICLE ON YOUR COMMUNITY*. YOU MAY ENTER ANY OR ALL FOUR CLASSIFICATIONS.

Copy the following form, fill it out, and attach it to the first page of your entry.

JUNIOR WRITING AWARDS ENTRY BLANK

Pupil's Name_____

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School_____ City and State_____

Principal_____ Teacher_____ (Indicate Miss, Mrs., or Mr.)

Pupil's age on March 15, 1946_____ Grade_____

Classification of Entry (Essay, Poetry, etc.)_____

I hereby certify that this is my own work. Pupil's Signature

_____

Approved, Teacher's Signature

Be sure you know all the rules for writing and submitting your entries. Ask your teacher for a copy of the rules booklet. Or write to:

★ ★ ★

SCHOLASTIC WRITING AWARDS
Junior Division
220 E. 42nd St., N. Y. 17, N. Y.

Citizenship Quiz

These questions are based on articles in this issue. Perfect score is 100. Answers are in TEACHERS EDITION.

DUTCH TREAT

Complete the following sentences by underlining the correct phrase. Score 5 points each. Total, 25.

1. Another name for Holland is (a) Never Never Land; (b) The Netherlands; (c) The Nether Regions.
2. Of the world's colonial empires, Holland's is the (a) smallest; (b) largest; (c) third largest.
3. The population of Holland numbers about (a) 900,000; (b) 9,000,000; (c) 90,000,000.
4. The nation that occupied Holland and flooded the land during World War II was (a) Belgium; (b) France; (c) Germany.
5. The nation helping the Dutch to put down the revolt in the East Indies is (a) India; (b) Great Britain; (c) China.

My score ____

SCIENCE MATCH

Listed below are four scientific discoveries. Match each with its discoverer. Score 5 points each. Total, 20.

_____a. Radioactivity of uranium
_____b. X-ray
_____c. Cathode ray
_____d. Radium

1. Sir William Crookes
2. Antoine Becquerel
3. Wilhelm Roentgen
4. Marie and Pierre Curie

My score ____

MOONQUIZ

Of the following statements about the moon, only three are correct. Check each correct statement. Score 5 points each. Total, 15.

1. The moon is a satellite of the earth.
2. The moon is 93,000,000 miles away from the earth.
3. The earth revolves about the moon and the sun.
4. The moon reflects the light of the sun.
5. The moon is closer to the earth than the earth is to the sun.

My score ____

DIG IN!

Circle the letter before the correct answers to the following questions. Score 4 points each. Total, 20.

1. What department of our Government is in charge of the nation's mineral wealth?

(a) Treasury Department; (b) Department of the Interior; (c) Department of Agriculture.

2. Who heads this department?

(a) Secretary Vinson; (b) Secretary Ickes; (c) Secretary Anderson.

3. Who recently proposed that the Antarctic be tapped for minerals?

(a) Captain Eddie Rickenbacker; (b) President Truman; (c) Admiral Richard Byrd.

4. What method did he recommend to unearth the rich mineral treasures from this frozen wasteland?

(a) Dynamiting; (b) Long-range atomic bombing; (c) Melting the ice-caps with powerful floodlamps.

5. One source of mineral wealth that has not yet been widely tapped is:

(a) the Continental Shelf; (b) the Continental Divide; (c) the Mississippi River.

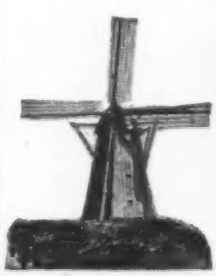
My score ____

PICTURES TO GUIDE YOU

Write your answers on the lines under each question. Score 5 points each. Total, 20.

My score ____

My total score ____

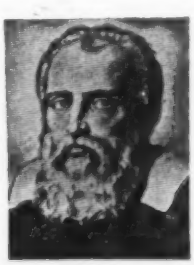


1. Nation whose land lies half below sea and river level.

_____

2. Who is the ruler of that nation?

_____



3. 17th century astronomer whose study of moon aided us.

_____

4. Movie star whose hero was the late President Roosevelt.

_____

SHEnanigans

"STYLE-CONSCIOUS" girls (and who isn't?) will love this heart-shaped purse. It dangles saucily from your belt – ANY belt – giving the "waist-line" interest which is so fashionable this year. It also matches the accessories suggested in this column last week!

Cut a heart from a square of paper 7" x 7". This is your pattern. If you wish to vary the size of the purse, you may do so before cutting into material!

Use same pattern to cut *back*, *front*, and *flap* of purse from red felt. As shown in Fig. 1, the *back* and *flap* are exactly the same. The *front* differs only in that it is cut off in a straight line 2" from the top.

Cut 2 strips of felt 3" wide and approximately 7" long. Each strip must fit around one side of *front* – Fig. 2. These are the *gussets* (or sides) of purse.

Fit *gussets* to back sides of *front* – see Fig. 2 – and sew by hand. A short running stitch (Fig. 2-A) may be used about ¼" from the edge, or sides may be whipped to *front* (Fig. 2-B). Sew *back* to *gussets* in same manner. Sew ends of *gussets* (at bottom point of heart) together.

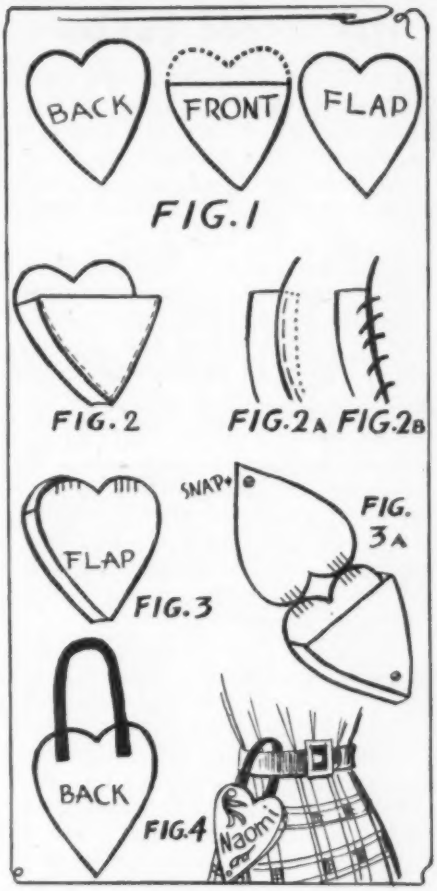
Push *gussets* toward inside of purse, and press *front* down on back. Close opening across top with snaps or a zipper.

Lap *flap* on top of *front*, and sew as in Fig. 3. *Flap* should not be sewn except as indicated or it will not open freely. Sew *snap* to inside point of *flap* and outside point of *front* – Fig. 3-A.

Cut 2 strips of felt about 1" wide and 10" long for *handle*. Sew together to make *double strip* and sew to *back* – Fig. 4. Instead of carrying purse in hand, run belt through handle and wear at waist – Fig. 5.

SUGGESTIONS: Cut name or initials from scraps of contrasting felt (any color) and sew to front of *flap*. Or embroider name on *flap*. Flowers and leaves may also be cut from felt and sewed on in attractive designs – Fig. 5.

If you don't care to make the *gussets*, sew *front* directly to *back*. Purse will not be as roomy inside, but handkerchief, comb, and change may still be carried in it. – MARY COOPER



Bragging, huh?

Sil: "I spotted a leopard yesterday."

Nil: "Oh, don't be silly. They grow that way."

Central News, Chicago, Ill.

S·T·A·R·R·E·D W·O·R·D·S

ords starred★ in the magazine are defined below

reclaimed (ree-CLAYMD), p. 4. To rescue and put in good condition. Reclaimed land is useless land that has been made usable for farming or as a building site. When swamps are reclaimed, they are drained and filled in so that they are level with the surrounding land. Arid areas are reclaimed through irrigation.

arable (AR-uh-bl. Pronounce the *ar* as in arrow), p. 4. Land that is suitable for farming.

nationalized (NASH-uhn-uhl-ized), p 5. Brought under the control of the national government. Nationalized industries are owned and operated by the government. They are the opposite of private industries, which are owned by private companies.

dwindling (DWINN-dling), p. 2. Becoming smaller and smaller.

Names and Places in the News

(The accented syllable is capitalized)

Wilhelm Roentgen (VIHL - helm RUNT-gehn or RENT-gehn), p. 6.

Antoine Becquerel (on-TWAN beck-REHL. Nasalize both *N*'s), p. 6.

Marie Curie (ma-REE kue-REE), p. 6.

Georges Melies (ZHORZH mail-YEZ), p. 3.

HERE'S A PEACH OF A POOCH

HOW TO MAKE A POOCH

GRAIN RUNS WITH TAIL
BEGIN WHITTLING AT THIS POINT
BEGIN WHITTLING AT THE TOP OF BACK LEGS AS THIS POINT WILL BE THE WIDEST FINISH WITH STAIN, PAINT ON EYES
NOTE CURVED TAIL
BOTH SIDES WILL BE THE SAME.

Easy to Whittle With an X-acto

Appealing, isn't it, this little wooden figure of "man's best friend"? A cinch to make, too, with the whittler's best tool, a handy, smooth-cutting X-acto Knife! This is one of 25 clever animal projects diagrammed in detail for you in the new 32-page booklet, "Whittling Is Easy With X-acto". Send 10c for a copy . . . see how easy it is to turn out an expert job with this little wonder knife!

Always Sharp, Always Ready

Here's the whittler's delight . . . an all-metal X-acto Knife, with special assortment of whittling blades. Firm-grip handle, designed for safety and precise control. Ideal for curves and corners. Complete with wooden chest, $2. Other X-acto Knives and Sets, 50c to $5.

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Or if not available, write direct to X-acto Crescent Products Co., Inc., 440 Fourth Avenue, New York 16, N. Y.

The Other Fellow

MAYBE you've never thought much about *good manners*. Maybe you've skipped the subject, calling it "sissy stuff." Maybe you've heard so much preaching about *manners* and *courtesy* that you don't bother to listen any more.

But have you ever thought about *good manners* as a way of making democracy work? That's right. *Good manners* are democratic. They give the other fellow a chance – an equal chance.

Let's take a couple of examples:

Speed Simpson is a self-pusher. He pushes his way ahead of others in cafeteria and movie lines. He hops on the bus first and grabs the only vacant seat. What does he care if others stand or wait? He got there first. Speed has the "big bully attitude."

Then there's Tom Wright. Tom takes his place in cafeteria and movie lines and quietly waits his turn. He stands back for girls and older people to board the bus first and never sits down when there are others standing. Tom believes in giving the other fellow a chance. Tom has the democratic attitude.

Give the other fellow a chance!

The Editors

How're you doing?

When leaving a party, you should go to the host or hostess and say:

A. "Thanks, the refreshments were drooly."

B. "Bye now, see you at school tomorrow."

C. "I enjoyed the party very much."

C is correct.

JOIN the Word Wizards! Grow *Word Trees* made up of words which are important in building a better world!

Send your *Word Trees* to *Junior Scholastic* Word Wizards, 220 East 42nd Street, New York 17, N. Y. Be sure to include your name, address, school, and name of your teacher. Use a penny postcard or give your *Word Trees* to your teacher to be sent with others from the class.

Each week we will publish some of the winners. *Word Wizard* buttons are awarded to all whose trees are accepted for publication.

FAITHFULNESS	HONEST
RESPONSIBILITY	ENDURING
IDEALS	LOYAL
ENDURANCE	POLITE
NOBILITY	FAITHFUL
DEPENDENCE	UNITED
SERVICE	LIKABLE
HAPPINESS	NEAT
INTEREST	ENTERPRISING
PURPOSE	SUCCESSFUL
	STEADFAST

DOROTHY JOHNSON
Holland (Va.) H. S.

MARLENE NELSON
Litchfield (N. H.) Jr. High School

EQUALITY	
FREEDOM	LOYALTY
FRIENDLINESS	ABILITY
ORDER	BROTHERHOOD
REASON	OPPORTUNITY
TRUTH	RELIGION

LOIS ANTENSON
Stokley School
Philadelphia, Pa.

E. CUNNINGHAM
Crosswicks (N. J.) School

THOUGHTFULNESS	BENEVOLENCE
RIGHT	RESPONSIBILITY
USEFULNESS	AMBITION
TRUSTWORTHINESS	VIGOR
HONESTY	EFFORT

DICK ROBINSON
Siwonay School,
Pelham, N. Y.

PHYLLIS FISHER
Laconia (N. H.) Jr. High School

SOME FUN!

Time Marches On

Jerry: "So, your grandfather's clock is over a hundred years old."

Perry: "Yeah. We raised it from a wrist watch."

LeVerne Stalsberg, Westly (Wis.) Public School.

Raised

Seeing Junior feeding the baby yeast, Mother cried out:

"What are you doing?"

"She swallowed my dime," said Junior, "and I'm trying to raise the dough."

Joy Dickerson, Seaside Park (N. J.) School

Clogged

Jack: "My car has an indifferent horn."

Jill: "What kind of horn is it?"

Jack: "The kind that doesn't give a hoot."

Judy Warren, Central School, Oelwein, Ia.

Heaven Can Wait

The condemned man was being given a choice for his last meal.

"What would you like to have most?" asked the warden.

"Strawberries and cream," answered the prisoner.

"But," exclaimed the warden, "strawberries are not in season now."

"That's right all right," said the patient convict, "I'll wait."

Irwin L. Lewis, Stuyvesant H. S., New York, N. Y.

Stowed Away

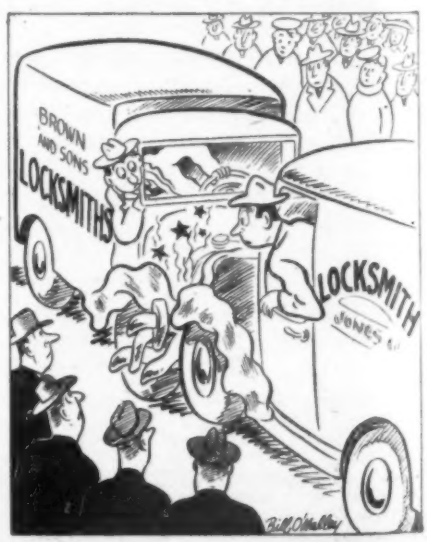
Billy: "Daddy, do squirrels live in trees?"

Dad: "Right in the trees, my boy."

Billy: "Then where do they keep their things?"

Dad: "Why – why – in a trunk, of course."

Lois Ann Thelss, School 24, Buffalo, N. Y.



Christian Science Mo

Taxing Income

Friend: "What's your son's average income?"

Father: "Between 3 and 4 a.m."

Shirley Grip, Jackson School, Rockford, Ill.

Auto with Wings

Policeman (on motorcycle): "Pull over, mister."

Driver: "Why?"

Policeman: "I'm giving you a ticket.'

Driver: "For speeding?"

Policeman: "No, for flying too low."

Jay Black, P. S. 70, Bronx N. Y.

Good (K)Night!

Teacher: "Why are the Middle Ages sometimes called the 'Dark Ages'?"

Pupil: "Because it was knight time."

Myra Campbell, Shelby (N. C.) Jr. H. S.

Younger Generation

A salesman arrived at an Indian reservation and introduced himself to the chief, who had two men with him.

The Indian chief returned the introduction.

"My name is Big Eagle. This is my son, Swift Bird. And my grandson, Flying Fortress."

Allen Mendonsa, Eleele (Hawaii) School

LETTER FROM A READER

Dear *Junior Scholastic:*

One of the reasons why I like the *Some Fun* and *Junior Writers* columns so much is that I find the addresses of boys and girls I would like to write to. I have found quite a few addresses and I am now starting a Pen Pal club. When it is organized, I think I shall have about fifty correspondents.

Sincerely,
Wayne Jordi, Illinois Park School, Elgin, Ill.

Joke of the Week

Top humor honors and the Gold Star JSA button for this week go to Jean Kubiak, North Collins (N. Y.) H. S.

A science teacher was displaying a tightly-sealed jar to her class.

"This jar," she said, "contains a deadly gas. What steps would you take if it escaped?"

A voice from the back of the room called out:

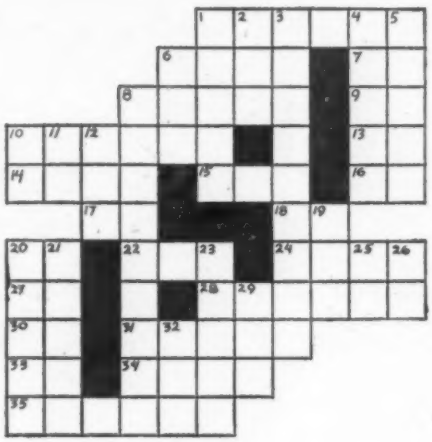
"Long ones."

Solution to Last Week's Word Puzzle

ACROSS: 1-Dan; 4-period; 7-Mo.; 9-A.D.; 10-Dresden; 13-red; 14-gain; 15-in; 16-franc; 19-rouse; 20-bi; 21-seul; 22-arc; 23-bottles; 26-ah; 27-yd.; 28-energy; 30-dad.

DOWN: 1-Di.; 2-aid; 3-nor; 4-Paris; 5-Eden; 6-De Gaulle; 7-men; 8-on; 11-sans; 12-dice; 16-fret; 17-rout; 18-Vichy; 20-brag; 21-sod; 23-by; 24-end; 25-sea; 29-rd.

news word



ACROSS

1. Organs in body which secrete substances.
6. Thin.
7. Opposite of down.
8. Large boats.
9. Preposition meaning *toward.*
10. Put in place.
13. Abbrev. for *company.*
14. Indian dress.
15. Part of the face having sight.
16. Abbrev. for *hour.*
17. Abbrev. for *Maine.*
18. Egyptian sun god.
20. Abbrev. for *height.*
22. Grab.
24. Ten cents.
27. Three-toed sloth.
28. Enlarged or shaped.
30. Abbrev. for *Georgia.*
31. Dialect.
33. Oldest city in world.
34. Past participle of *see.*
35. Anniversary of day Christ rose from the grave.

DOWN

1. To move along smoothly.
2. Part of the mouth.
3. Large seaport in Netherlands.
4. People of Netherlands.
5. Trail of a wild animal.
6. Feminine pronoun.
8. Person who knows much about science.
10. Postscript.
11. Sixth note of scale.
12. Part of body between shoulder and hand.
19. Goal.
20. Capital of Netherlands.
21. Band of jewels worn around the head.
23. Thorny bush.
25. Objective case of *I.*
26. Nickname of *Edward.*
29. Very long time.
32. River in Scotland.

Solution in Teachers Edition this issue; in Pupils Edition next issue.

Junior Scholastic

Your World-View Magazine for School and Home

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Your health and

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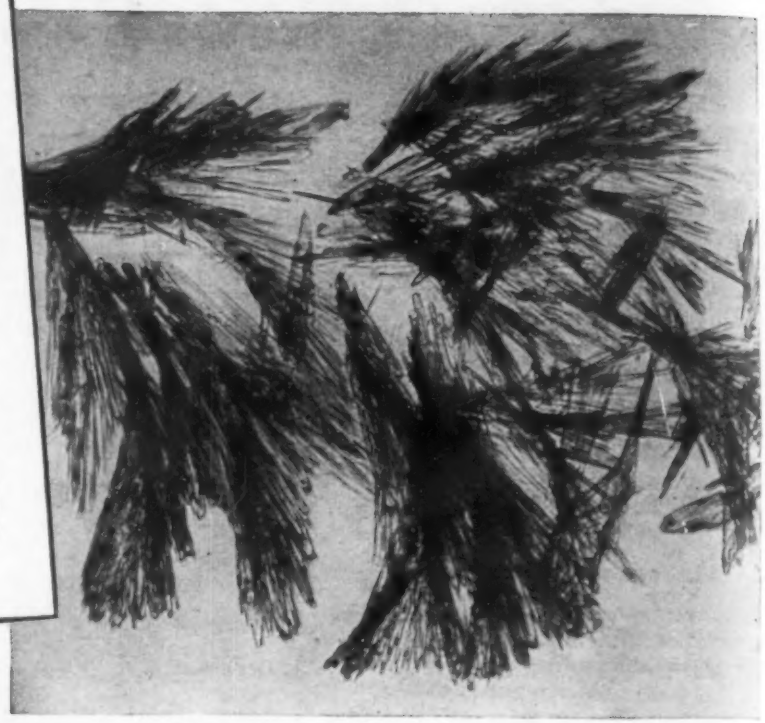
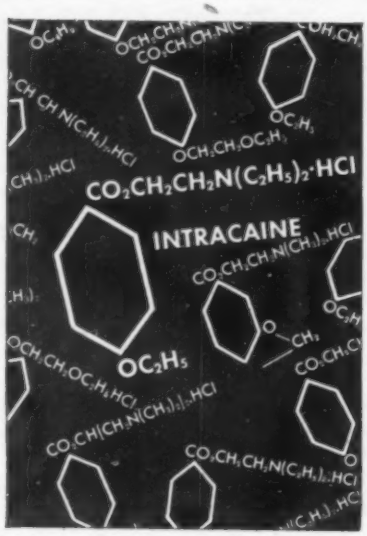
Against every bodily affliction is pitted the relentless, unconquerable mind of man. Physicians in clinics, surgeons in operating rooms, medical scientists in research laboratories like those of Squibb—all are waging a winning struggle against disease. Not all the answers have been found as yet, but the steady forward march of medical science inspires infinite hope. Work being done at the Squibb Laboratories and the Squibb Institute for Medical Research is typical of the efforts of scientists everywhere to make life safer for you.



Another germ fighter is aspergillic acid, a member of the newly discovered family of antibiotics, of which penicillin is the most famous. Aspergillic acid is active against many species of bacteria, and offers promise for effective surface therapy. Crystals of aspergillic acid (shown above) look like sprays of spruce needles; they were isolated and chemically analyzed at the Squibb Institute for Medical Research.

New weapon against measles is gamma globulin, a plasma protein produced from blood donations. Its protective action is due to the fact that about 90 per cent of blood donors have had measles and have developed an immunity which can be passed on to others. At the Squibb Laboratories, electrophoretic testing (shown above) insures product purity. Another line of attack against measles is the search for a vaccine—and at the Squibb Institute for Medical Research a step forward has been made by growing the measles virus in chick embryos.



Molecules vs. pain. Seeking a better local anesthetic, Squibb scientists first analyzed the molecule of the best then available. For years they synthesized and tested hundreds of new compounds, rearranging molecules until they created Intracaine, a new advance in the relief of pain.

New aid to brain surgery is fibrin foam with thrombin, both derived from blood plasma. Packed in the incision, this sponge-like foam reduces danger of hemorrhage, aids normal blood clotting. Squibb was among the first producers of fibrin foam for military hospitals.

SQUIBB

THE PRICELESS INGREDIENT OF EVERY PRODUCT
IS THE HONOR AND INTEGRITY OF ITS MAKER

Creative Relationships In the Classroom

3. VARIETY OF EXPRESSION

AT NO TIME is the teacher's power for leadership more marked than when his variety of expression arrests attention. Creative relationships among pupils are likewise stimulated when their discussion is spiced with words or phrases fresh in youth's vocabulary.

One class we visited found the following topic and question on the blackboard at the beginning of the period:

Reading and listening vocabularies can be transformed into writing and speaking vocabularies. Are we satisfied for the present with our progress?

Miss R: "We like to have a speaker appeal to our imagination. It stimulates creative listening. I have been aware recently of certain lags in attention. It has occurred to me that we may need a 'priming period' in transferring some new words or aptly turned phrases from our reading vocabularies to our speaking vocabularies."

William: "How can we go about it?"

Miss R: "I took a five-minute check on myself last night and found two expressive words and four expressive word groups that I have allowed to fall into disuse. I found them in the article 'Central American Neighbors,' in the issue of *Junior Scholastic* for January 14th, 1946.

humorously
actually
desire for Democracy
struggling to achieve
encouraging start
perpetual spring

I underlined them so that when I open to that article again they will catch my eye and I shall have a further desire to use them."

James: "I should think that if we look down a page we could spot words we haven't been using. Sounds easy."

Miss R: "Let's take time for it this morning while we are interested. Raise your hand when you have found the article you want to use as a quick refresher in expression."

STUDENTS' FINDINGS

From the Pennsylvania R. R. advertisement, "Serving the Nation" –
dependable, individual, convenient, advantages, quick access, available

From "Radar Jam Session" –
obliterated, enabled, virtually

From "Builders of America" –
crusades, boundless energy, truly democratic

From "Citizenship Quiz" –
common language, identifies, reflect sounds

From the advertisement, "Wilson Sports Equipment" –
modern era, craftsmen, new skills, new thrills, for today's type

George: "I should think we could take five or ten minutes for this every week."

Miss R: "What should we call such a period?"

Hazel: "I should think we could call it our 'Transformation Period.' We are really transforming our reading vocabularies into our speaking vocabularies, aren't we?"

Miss R: "Yes, you certainly will be gathering materials for it. But the transformation does not occur until you have really used it in your speaking vocabulary. Let's call it the 'Transformation Period.' I think it would be thrilling. We may become a new kind of craftsmen. I suppose we could call ourselves 'word-crafters.'"

Next week: ***A Clinic in Criticism***

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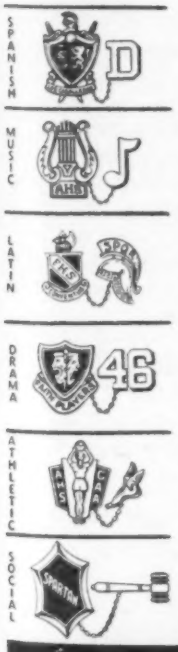

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AT WHAT AGE ARE DIETS POOREST?

As school children grow older, good eating habits tend to go downhill. With the onset of the 'teens and continuing through high school, diets reach a nutritional low, according to a recent study in nine test schools.

Whatever the causes—press of new outside interests, impatience with routines, resistance to authority—the poor quality of the average high school diet is a fact . . . one that may very well have far-reaching effects on school work habits, behavior and ability to learn.

In this study, which analyzed the breakfasts eaten by grade school and high school pupils, comparative ratings were established by expert nutritionists. Against an ideal possible score of 6.0 points, these were the ratings of the meals consumed:

In grades 1 to 8, the average rating of 3211 breakfasts was 3.5

In grades 9 to 12, the average rating of 942 breakfasts was 2.5

Most unfortunate, here, is the paradoxical *change* in breakfast menus. Among adolescent boys and girls, who surely need three square meals, there is seen a definite *worsening* of eating habits.

As an aid to teachers who would like to correct such trends in nutrition, General Mills, Inc. is now preparing a variety of educational materials. These are booklets, posters, plan books and other tools —all prepared under the direction of a committee of educators. This complete program will be available in limited quantities without cost, at an early date.

General Mills, Inc.

Minneapolis, Minnesota

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EVERY DAY'S DIET SHOULD INCLUDE THESE FOODS

GREEN AND YELLOW VEGETABLES . . . some raw, some cooked, frozen or canned. At least one serving a day.

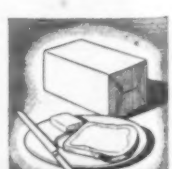
ORANGES, TOMATOES, GRAPEFRUIT . . . or raw cabbage or salad greens. At least one serving a day.

POTATOES AND OTHER VEGETABLE AND FRUITS . . . raw, dried, cooked, frozen or canned. Two or more servings a day.

MILK AND MILK PRODUCTS... fluid, evaporated or dried milk. One quart (or its equivalent) a day for children and expectant or nursing mothers; one pint a day for all others.

MEAT, POULTRY, FISH OR EGGS... or dried beans, peas, nuts or peanut butter. One serving of meat, poultry or fish a day, occasionally peas or beans instead. Three or four eggs each week.

BREAD, FLOUR, CEREALS . . . natural whole-grain or enriched or restored. Three or more servings a day.



BUTTER AND FORTIFIED MARGARINE . . . use for spreads and for seasoning as you like and as supplies permit.

In addition, all growing children and all expectant or nursing mothers should be provided with 400 units a day of Vitamin D in the form of Vitamin D milk (fresh or evaporated), fish liver oil or Vitamin D concentrate